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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,516	11/09/2000	Ikuo Sakaguchi	ND-363US	1745

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EXAMINER

GESESSE, TILAHUN

ART UNIT

PAPER NUMBER

2684

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/708,516	Applicant(s) SAKAGUCHI, IKUO	
	Examiner Tilahun B Gesesse	Art Unit 2684	
	-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --		

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 05 April 2004.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-8 is/are pending in the application.

4a) Of the above claim(s) 8 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-7 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____

DETAILED ACTION

1. This is in response to the amendment to after final filed April 6, 2003, in which claims 1 through 7 are pending.
- 2.

Allowable Subject Matter

The indicated allowability of claim 8 subject matter is withdrawn in view of the newly discovered reference(s) to Schwendeman (US 5,289,178). Rejections based on the newly cited reference(s) follow.

Claim Objections

3. Claim 1 is objected to because of the following informalities: Claim 1, line 10, "may give a warning of radio interference". Appropriate correction is required. The underline phrase lack positive recitation of the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cina et al "Cina" (5,937,348) in view of Schwendeman (5,289,178).

As to claim 1, Cina discloses portable telephone radio set (a remote unit 30 and 32) with an interference detection function (61) to which a terminal equipment can be externally connected to effect data communication therewith (figures 3 and 4), comprising: a warning section (61) for warning radio wave interference by audio or video signals (column 4, lines 13-36 and figure 4), and a control circuit section (micro-controller 52) for detecting interference of radio waves and controlling said warning section (column 4 lines 34-36) said control circuit section (52) reporting, when said control circuit section detects a radio wave interference fault, contents of the fault to said warning section (61) so that said warning section may give a warning of radio wave interference (RSSI) in a predetermined form based on at least one of visibility or audibility (column 4, lines 13-36 and figure 4).

Cina does not expressly teach retransmission due to the mobile stations are out of band or transmitted data is not encoded. However, Schwendeman teaches the pager causes a specific series of data words to be transmitted by the transmitter 11, and displays (40) signal received by measuring (column 4, lines 4-10 and column 4, line 26-39 and figures 1 and 3) Since, Cina, in a similar field of endeavor, teaches data communication, interfacing PC (figure 1). Then, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Cina and Schwendeman, in teaching the retransmission of data in better rate of data, as taught by Schwendeman, in order to alert the user that the status of communication received at particular instant of time.

Art Unit: 2684

As to claim 3, Cina discloses the control circuit section detects a radio wave interference fault in the course of a zone switching operation which is caused by the presence of a channel having a higher reception level than that of the channel being waited from that at least one of unfavorable reception of broadcast information and interruption of radio waves occurs in a condition of abandonment of the pertaining channel (column 4, lines 13-36 and figure 4).

6. Claims 2,5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cina and Schwendeman and further in view Takahara.

As to claim 2, Cina disclose the control circuit section (52) detects a radio wave interference fault (column 4 lines 34-36). Cina and Schwendeman do not expressly teach selection operation of a standby channel from at least one of unfavorable reception of broadcast information and interruption of radio waves occurs in either one of conditions out of zone indication and abandonment of the pertaining channel.

However, Takahara discloses selection operation of a standby channel from at least one of unfavorable reception of broadcast information and interruption of radio waves occurs in either one of conditions out of zone indication and abandonment of the pertaining channel (col. 12 line 66-col.13, line 18 and fig.2).

Since Cina, in the similar field of invention, discloses regions or zones of poor signal strength , dead zone or hostile zone to radio frequency (column 4, lines 23-26). Then, it would have been obvious to one of ordinary skill in the art at the time of inventions was made to combine Cina ,Schendeman and Takahara in detecting weak or

Art Unit: 2684

interfering signals and alert the user, as taught by Takahara, in order to conserve time and power by attempting to dial or make a call while the portable phone is in an region where there is not good signal reception

As to claim 5, Cina discloses control circuit section (52) detects a radio wave interference fault during communication(column 4 lines 34-36).

Cina and Schwendeman do not expressly disclose the channel is switched to a channel of a level lower than the level of the channel which has been used for communication till then, it is a cause of the channel switching that at least one of interruption of radio waves occurs.

However, Takahara discloses the channel is switched to a channel of a level lower than the level of the channel which has been used for communication till then, it is a cause of the channel switching that at least one of interruption of radio waves occurs (col.13 , line 65-col. 14 line 40 and fig.3).

Since Cina, in the similar field of invention, discloses regions or zones of poor signal strength , dead zone or hostile zone to radio frequency (column 4, lines 23-26). Then , it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Cina, Schwendeman and Takahara in switching channels based on channel strength , as taught by Takahara, in order to avoid interruption of the communication taking place at the particular instant of time.

Art Unit: 2684

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cina and Schwendemann in view of Takahara as applied to claims 1-3, and 5 above, and further in view of Hasegawa (6,073,024).

As to claim 4, Cina and Takahara everything as explained above, except the level of each of perch channels is measured, is higher than a predetermined threshold value.

However, Hasegawa discloses the level of each of perch channels is measured, is higher than a predetermined threshold (col.19 lines 19-29 and fig. 14).

Since both art are combating the frequent retransmission upon the communication is disabled and warn the user that communication is disable due to signal strength is below minimum threshold. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cina, Schwendemann and Takahara in measuring perch channels detected, as taught by Hasegawa, in order to retrieve by scanning perch channels with higher signal strength to communicate at specific time and location.

8. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cina in view of Takahara as applied to claims 1-3,5 above, and further in view of Matsumoto (6,556,822).

As to claim 6, Cina and Takahara do not disclose displaying the abandoned channel number.

However, Matsumoto discloses the display device 24 displays signals including warning which informs the user that the digital cordless telephone is out of service area

Art Unit: 2684

and a number of sample signals or bars "channel numbers" with lower signal strength (interfering channels) and eventually disappear (col. 5, lines 5-19 and fig. 3A-3D).

Since all prior art, in the similar field endeavor, in detecting and measuring signal strength for future usage, therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve Cina and Takahara by warning ahead of time, as taught by Matsumoto, in order to avoid all of a sudden terminating communication, retransmitting and dialing attempt that the user make to panic.

As to claims 7, Cina and Takahara do not specifically disclose the number of occurrences of retransmission per unit time measured during the communication.

However, Matsumoto discloses the number of failure of reconnecting for certain time (column 2 lines 55-68 and fig.4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify Cina and Takahara in warning the user based on number of failure "occurrence", as taught by Matsumoto, in order to avoid sudden terminating a communication under progress.

Response to Arguments

9. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Coverdale et al disclose portable telephone radio set (fig.1) with an interference detection function (25 and 70) to which a PSTN "terminal equipment" can be externally connected to effect data communication therewith (col. 3 lines 23-28 ,col.5 lines 37-40 and figs. 1 and 5), a warning section (60) for warning radio wave interference (col.2 lines 1-12 and fig.1), and a control circuit section (70) for detecting interference of radio waves and controlling said warning section (col. 3 lines 30-36 and fig.1) said control circuit section (60) reporting, when said control circuit section detects a radio wave interference fault (col.3 lines 23-33 and fig.1),contents of the fault to said warning section so that said warning section may give a warning of radio wave interference in a predetermined form based on at least one of visibility and audibility (col.2 lines 1-12).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tilahun B Gesesse whose telephone number is 703-308-5873. The examiner can normally be reached on flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Art Unit: 2684

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TBG

April 23, 2004

Art unit 2684


T. H. GEESSES
PATENT EXAMINER